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Third annual progress report of the Board of Auditors on the implementation of the United Nations enterprise resource planning system

Note by the Secretary-General

The Secretary-General has the honour to transmit to the General Assembly a letter dated 30 June 2014 from the Chair of the Board of Auditors transmitting the report of the Board on the progress in the implementation of the enterprise resource planning system (Umoja).

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Letter of transmittal

Letter dated 30 June 2014 from the Chair of the Board of Auditors addressed to the President of the General Assembly

I have the honour to transmit to you the third report of the Board of Auditors on the implementation of the enterprise resource planning system.

(*Signed*) Sir Amyas C. E. **Morse**
Comptroller and Auditor General of the
United Kingdom of Great Britain and Northern Ireland
Chair of the Board of Auditors

Enterprise resource planning system (Umoja): key facts

Cost

$348 million	Total approved project budget to end of 2015 to cover Foundation and Extension 1
$271 million	Project spend to 31 March 2014 (78 per cent of approved budget)
$372 million	Anticipated cost to end of 2015 to cover Foundation, Extension 1 and design of Extension 2
$30 million	Estimated cost of contracted services required for the building, testing and deployment of Extension 2

Timeline

2006	General Assembly request for project proposal
2009	General Assembly approves project proposal
2018	Forecast date for full implementation (five years later than originally planned)

Benefits

$140 million to $220 million	Administration's forecast of annual recurrent benefits

Third annual progress report of the Board of Auditors on the implementation of the United Nations enterprise resource planning system

Summary

1. The implementation of the new enterprise resource planning system (Umoja) throughout the United Nations Secretariat is a complex, high-value project to modernize a wide range of business processes and systems that are key to the efficient and effective functioning of the Organization.

2. In June 2006, the General Assembly requested the Secretary-General to present a detailed proposal for a new enterprise resource planning system. In December 2009, the Assembly approved the proposal. Since then, the project has undergone several significant changes, affecting the original approach, the expected cost and the planned time to implement. The deployment strategy is to roll out the system in different parts of the Organization (clusters) in three functional phases:

(a) **Foundation**: finance processes (funds management and financial accounting), supply chain, project management and sales and distribution. Umoja Foundation is essential to supporting the requirements of the International Public Sector Accounting Standards;

(b) **Extension 1**: human resources management processes such as organizational and position management, personnel administration, entitlements, benefits and time management. Payroll, travel initiation, travel expenses and online booking are also included;

(c) **Extension 2**: other important administrative processes such as budget formulation, force planning, programme management, supply chain planning, warehouse management and conference and event management, full grants management and commercial activities.

3. In 2011, the General Assembly, in its resolution 66/246, requested the Board to submit annual progress reports on the enterprise resource planning project. In its first such report (A/67/164), the Board highlighted that the project was in substantial difficulty and recommended that the Administration should fundamentally reassess it to ensure that the risks were managed. In its second report (A/68/151), the Board acknowledged the Administration's progress in addressing some of the weaknesses, but highlighted that implementation challenges were about to escalate and identified the need for an increased focus on business readiness and change management.

4. Since the Board's previous report, the United Nations has begun to roll out Foundation in peacekeeping operations and 17 of 38 special political missions. In the present report, the Board sets out the status of the project as at 31 May 2014, focusing on the background, the beginning of project implementation, achieving successful project delivery and governance and management.

Overall conclusion

5. The enterprise resource planning project, if implemented successfully, remains an essential opportunity to modernize the business administration of the United Nations. The milestones reached in November 2013, with the beginning of the implementation of Foundation in peacekeeping operations, and in March 2014, with the roll-out to special political missions, were significant, given the project's complexity and difficult start. Some 4,000 staff in 300 locations are using the system. It is clear that the technical solution is viable and will be able to support a large and complex part of the United Nations. Nevertheless, the Organization has experienced significant difficulty in embedding the new standard business processes, primarily owing to the level of divergence of existing processes, both across organizational units and from the modern processes designed and embedded in the new system, and the lack of business readiness to shift to new ways of working.

6. Inevitably, as is common in other roll-outs of enterprise resource planning systems of this scale, problems will occur. The management planned for a period of stabilization after the implementation of Foundation processes. However, the scale and depth of the problems illustrate not only the fundamental need for the new system, but also the challenge of introducing standardized business processes and new ways of working into a highly federated organization with a deeply entrenched staff and managerial culture. It is the senior management's response to the challenge that is important. The Administration has demonstrated perseverance and pragmatism in responding to emerging risks and issues that could compromise the system's aims and objectives. The problems have not yet been resolved, however, and the senior management must continue working collectively to identify what is required to make business units ready to implement the system and to make efficient and appropriate use of the new business processes and supporting technologies. The time and resources required should not be underestimated.

7. The initial roll-out of Foundation has provided evidence of the need to introduce change more effectively in the future. Resolving these issues will require concerted effort throughout the Organization. While the benefits in the medium to long term remain worth investing in, this cannot be at any cost. The Organization needs to develop an achievable, fully funded and independently assured deployment plan that reflects the diversity and complexity of the United Nations. The Board expects the Organization to continue to apply lessons from the pilots and initial roll-out to inform its planning for the remainder of the project, including its assessment of the project's full cost and likely return on investment.

Key findings

Beginning of project implementation

8. **The pilot of Foundation at the United Nations Interim Force in Lebanon in July 2013 was a test of the technical functionality of the system and revealed a number of important lessons that enabled the Administration to better prepare for the roll-out. The pilot did not, however, reveal the scale of the problems that would emerge**. In the lead-up to Foundation going live on 1 July 2013, and immediately thereafter, status reports submitted to the steering committee showed no significant issues in terms of business readiness, the technical solution and the ability of staff to use the new system. Although the pilot identified a number of problems, a pilot in a single mission was insufficient to determine wider readiness or identify the scale of significant differences in working practices in multiple locations.

9. **In August 2013, the project team reported two critical issues relating to data management that needed to be addressed before the roll-out of Foundation could begin**. The steering committee decided to delay the roll-out by a month to provide time to resolve the issues.

10. **The final decision to roll out Foundation in peacekeeping operations and 17 special political missions was based on an in-depth assessment of operational readiness that concluded that staff, processes and technology were ready**. The steering committee was aware that problems would emerge, but considered that they would be manageable and that on balance it was better to begin the roll-out to protect the deployment schedule.

11. **Following the roll-out of Foundation in peacekeeping operations and special political missions, the Organization swiftly experienced significantly more problems than expected**. For example, staff did not adopt the new business processes and were using workarounds, in particular in critical financial processes. The level of training and skills, management understanding of the solution and the inconsistency of processes between locations were significant contributory factors to the problems that emerged. The issues faced demonstrate weaknesses in the acceptance procedures (and therefore accountability) on the part of all stakeholders involved in signing off on technical, process and business readiness.

12. **In February 2014, in the light of the problems encountered, the steering committee reprofiled the deployment schedule to create more time to address business readiness and established a post-implementation task force to tackle the problems in peacekeeping operations**. Those decisions were necessary and pragmatic, in particular the deferral, from July 2014 to June 2015, of roll-out in departments based in New York owing to concerns about business readiness within the wider Secretariat and the level of resources being used to support the stabilization of Foundation in peacekeeping operations. At the time of the audit, the implications for project cost, delivery and benefits were uncertain. The Secretary-General will report thereon in his sixth annual progress report.

13. **There has been a significant and collective effort to resolve major issues with financial transactions in peacekeeping operations**. At the time of preparation of the present report, the Administration was unable to complete bank reconciliations, reconcile payroll or clear accounts payable documents. As at the end of April 2014, there were 58,000 open items in the United Nations bank accounts, an imbalance of $66 million in the payroll clearing account and more than 27,000 open accounts payable documents on the enterprise resource planning system.

14. **The high volume of open and unreconciled transactions in respect of bank reconciliations, accounts payable and payroll could affect the integrity of peacekeeping accounting and financial records and may indicate that key internal controls have been inoperable during the financial year**. The Board will assess the impact on its audit opinion as it completes the audit of the financial statements for peacekeeping operations for the year ended 30 June 2014. At the time of preparation of the present report, the task force's work was continuing and its final results were not available for review by the Board. It also was not clear when the system and the new operating model would be stabilized in peacekeeping operations.

15. **Experience to date has underlined that readiness on the ground, rapid adoption of new processes and systems and effective handover from the project team to the business are essential for successful and timely implementation**. The initial implementation of Foundation has taken longer, raised more issues and tied up more resources than expected. Addressing the problems and working to stabilize the implementation in the post-deployment stage has heavily occupied the project team and has affected its preparations for future releases of the system.

Achieving successful project delivery

16. **In the absence of any clear linkage between planned expenditure and planned deliverables, the Board can provide no assurance that expenditure to date is matched by the appropriate level of actual delivery**. As at 31 March 2014, the project had spent $271 million, 78 per cent of the approved budget of $348 million to the end of the biennium 2014-2015. The Administration is forecasting that it will need to spend $372 million to complete the design, build and implementation of Foundation and Extension 1, and the design of Extension 2, leaving a known funding gap of at least $24 million. The anticipated final cost of the project is unknown because the cost of Extension 2 has not been fully defined.

17. **The Board can provide no assurance about the accuracy of the projected cost of Foundation and Extension 1, but considers their delivery within the current budget to be highly unlikely**. On the basis of the current rate of expenditure per month, and the likelihood that more support than expected will be needed for the remaining roll-outs, the project will exceed the approved budget in June 2015 at the latest.

18. **The level of associated costs remains unknown**. A previous Board recommendation notwithstanding, the associated costs incurred, such as data cleansing and training, are not recorded centrally. The full costs of the project, and the extent of extra work and dedicated resources required for implementation, therefore remain unknown. Failing to capture the associated costs of the pilots and early roll-outs has limited the lessons for future deployment in terms of advising business units of the resources that they will need to get ready for and then use the enterprise resource planning system.

19. **In the light of the delays already incurred, and the likelihood of further delays, the Board considers that the revised deployment schedule agreed upon in February 2014 is unlikely to be met**. The need to spend additional time and resources stabilizing the system during the initial roll-out of Foundation is a strong indicator of the post-implementation challenges that the Organization will face when roll-out begins in the wider Secretariat. There has been no independent assurance that this deployment schedule can still be met.

Lessons from Foundation roll-out

20. **The Organization gave insufficient emphasis and resources to high-quality training for staff in the standardized business processes and new ways of working**. The original estimate of training costs in April 2008 was $37 million, but this was reduced in September 2011 to $7.4 million (2 per cent of the overall project budget). The Administration expected further costs to be met by operational budgets in human resources and roll-out sites. There is no evidence that such budgets have been allocated or funds ring-fenced. Following the post-implementation task force, the Administration has increased its training efforts and established an Umoja academy to train a cadre of staff in how to manage the new business processes.

21. **While the criteria used to assess business readiness were in principle sound, in practice the approach did not identify the scale of issues that needed to be addressed before the roll-out began**. The Organization has not yet determined the improvements that are required in its approach to assessing business readiness. Such improvements will be required in order to provide the business readiness assurance and sign-off necessary before future roll-outs.

22. **The deployment of Foundation in peacekeeping operations has proved that a collective effort throughout the Organization is a fundamental requirement for the successful implementation of the enterprise resource planning system**. Process owners, the project team and the heads of business units, in this case the Under-Secretary-General for Field Support, all have important roles and their respective individual accountabilities need to be clear. Although the Organization prepared the peacekeeping missions for the roll-out, it underestimated the degree of business change required. For future roll-outs, senior leaders must be clear on the resources and skills required, drawing on guidance and support from the process owners and the project team. Delivery of those responsibilities is impossible without effective partnership and coordination.

23. **The full achievement of the project's objectives is being hampered by the lack of a clear target operating model for the United Nations**. The senior management has identified the need for such a model and recognizes its importance to the achievement of the project's objectives. The Board continues to highlight, however, that the absence of a model could result in future costs to retrofit the implementation of the system and undermines management accountability for the delivery of the full scope and benefits of the project. Managers need to understand the changes needed and their role in delivery.

Governance and management

24. **Progress is being made to quantify the benefits from more efficient and cost-effective ways of working, but the plans and baselines for realizing and measuring them have not yet been established**. Process owners are not using a consistent approach to benefits quantification. More work is also needed to develop and raise awareness of the benefits that could be gained through the exploitation of new data and information throughout the Organization. Process owners have the opportunity to use learning from the implementation to date to refine any assumptions around potential qualitative and quantitative benefits when developing benefits realization plans for each department or office.

25. **Despite revising its deployment approach in February 2014, the Administration remains confident that the current timeline for realizing benefits will not change**. Without robust plans to audit, the Board cannot reach a conclusion on either the robustness of the benefits projections or the timeline for realizing them. The Administration has advised the Board that the benefits projections and timeline reported in the fifth progress report of the Secretary-General (A/68/375 and Add.1), with benefits beginning to accrue from 2017, starting in peacekeeping operations, remain unchanged. The Board's view is that it will be challenging to achieve the level of benefits expected in the light of where the project is in terms of stabilizing the system in peacekeeping operations.

26. **While the steering committee took prompt and necessary decisions to establish a task force to tackle emerging problems and to reprofile the project deployment schedule, those decisions were taken without good information on the consequences for cost**. The steering committee needs to improve its consideration of risks and issues during its decision-making process by considering quantified impacts, scenario planning and assessments of the levels of uncertainty in forecasts (of cost, time, quality and benefits).

27. **Progress has been made in establishing a project plan that enables better monitoring of overall progress against expenditure and incorporates the activities, milestones and dependencies of each project work stream**. The project team now tracks expenditure against the expected date of completion for major milestones.

28. **The action taken to strengthen project management capability has not matched the increasing complexity and demands of the project**. There is a need to balance the effort put into planning and monitoring versus actual delivery, but without further improvements the Organization cannot with any confidence forecast the costs of full delivery or the resources needed to support the completion of the full scope of the project's build, implementation and deployment phases. The project management office remains small for a project of this scale and complexity.

Recommendations

29. The Board reiterates 16 of its previous recommendations that have been partially implemented or not implemented (see annex). To maximize the chances of successful completion of the project, and the achievement of its aims, the Board makes the following new and additional recommendations to the Administration:

(a) **Reassess the feasibility of the budget and the revised project timetable agreed upon in February 2014, drawing on learning from the roll-out of Foundation and the pilot of Extension 1.** The assessment should take into account the potential impact of identified risks and the level of contingency required. It should also include consideration of improved insight into the disparate business processes throughout the Organization and the current level of business maturity, the level of uncertainty over how long and how much it will cost to stabilize the system during the roll-out and a robust forecast of the cost and time needed to complete the project under the current scope. The new plan should also provide for increased time and funding for business readiness and training activities before the roll-out and for support to embed new ways of working after the system has gone live. The plan should be subject to independent assurance and the findings and proposals reported to the General Assembly at the earliest opportunity;

(b) **Heads of business units, the process owners and the project team should each provide positive confirmation to the management committee that all enablers necessary for a successful roll-out are in place.** The sign-off of business readiness for the beginning of Foundation roll-out indicated that the business was ready, but in practice that was not the case. Achieving business readiness must be a collective responsibility;

(c) **Continue to embed the concept of process ownership by strengthening the partnership with heads of business units.** This needs to be supported by establishing formal mechanisms for agreeing upon benefits realization plans and solving disagreements between process owners and heads of business units;

(d) **Ensure that heads of business units have the resources and skills required to implement the standard business processes and new ways of working successfully.** The implementation of an enterprise resource planning system requires investment in business change, training and data management. For future roll-outs, senior leaders must be clear on the resources and skills required, drawing on guidance and support from the process owners and the project team, to use the resources available to them effectively or highlight any gaps;

(e) **Process owners should use learning from the implementation to date to refine any assumptions around potential qualitative and quantitative benefits when developing benefits realization plans for each department or office.** This will improve the accuracy of benefits projections and support heads of business units to plan future budget proposals.

Follow-up of previous recommendations

30. Of the 13 recommendations made in the Board's previous report, all of which were accepted by the Administration, none have been fully implemented, 6 are under implementation, 4 have not been implemented and 3 have been closed by the Board. In its first progress report, the Board made 13 recommendations, 3 of which were implemented in 2012. Of the 10 outstanding recommendations, a further 2 have been implemented, 5 are under implementation, 1 has not been implemented and 2 have been closed by the Board (see the table below).

Status of implementation of previous recommendations

	Fully implemented	*Under implementation*	*Not implemented*	*Overtaken by events*	*Closed by the Board*
Total (2012)	–	6	4	–	3
Total (2011)	2	5	1	–	2
Total	**2**	**11**	**5**	–	**5**
Percentage	**9**	**48**	**22**	–	**22**

Note: The total for 2011 does not include three recommendations implemented in 2012.

31. The Board recognizes that the Administration's focus from the third quarter of 2013 was increasingly on rolling out the project and not on strengthening aspects of project management, and that in some cases well-intentioned action did not deliver the desired result. As indicated herein, however, the Board is concerned that the continuing weaknesses undermine the Administration's ability to manage the project and make well-informed decisions on its deployment strategy. Further detail is provided in the annex.

I. Background

1. The implementation of the new enterprise resource planning system (Umoja) throughout the United Nations Secretariat is a complex, high-value project to modernize a wide range of business processes and systems that are key to the efficient and effective functioning of the Organization. The new system spans most of the Organization's administrative and support functions, cutting across finance, supply chain and procurement, human resources, central support services and programme and project management. It includes entities within the wider United Nations beyond the core Secretariat, many of which have other governance and accountability structures, funding sources and ways of working.

2. The General Assembly approved the project in 2006 in its resolution 60/283. In the first progress report of the Secretary-General (A/64/380), the Administration specified that the high-level aims in implementing the enterprise resource planning system were to support management reform, through improved information, accountability and the better direction of resources, and achieve more efficient and effective working practices, through improved systems and processes. The Administration has forecast that the project will deliver recurring annual financial benefits of between $140 million and $220 million.

3. In 2009, the United Nations established the enterprise resource planning project team and appointed a project director. The governance structure of the project has been enhanced over time. Currently, the project director reports to the Under-Secretary-General for Management, who is the project owner and chairs the project steering committee. The steering committee also includes the Chef de Cabinet, the Under-Secretary-General for Field Support, the Controller, the Chief Information Technology Officer and five business process owners (see figure I). The Under-Secretaries-General for Internal Oversight Services and Legal Affairs hold observer status.

4. In 2013, the Administration took the positive step of establishing five senior process owners to act as change agents in their respective functions, including responsibility for business readiness, the integration of the processes that they lead with the Organization's future service delivery model and sign-off of business cases showing the expected qualitative and quantitative benefits. The five process owners are the designated Assistant-Secretaries-General or directors responsible for finance, corporate services, logistics, conference management and events management, and human resources management.

Figure I
Key roles in the delivery of the enterprise resource planning project

Chef de Cabinet
Chair of management committee
Under-Secretary-General for Management
Chair of steering committee and project owner
Steering committee
Responsible for governance of the project
Chef de Cabinet, process owners, Chief Information Technology Officer, Under-Secretary-General for Field Support
Project director
Responsible for delivery of the system
Assistant-Secretary-General
Five process owners
Assistant-Secretaries-General or directors for finance, corporate services, logistics, conference management and events management, and human resources management

5. The clients of the project are the heads of business units and the staff who will use it to deliver their mandates more effectively. They are increasingly required to play a fundamental role in successfully implementing the improved ways of working embodied in the new system. The General Assembly also expects significant benefits from the project, in terms of more effective delivery of mandates, the freeing-up of resources from the introduction of more efficient and effective ways of working and improved information and transparency to support decision-making.

A. Implementation strategy

6. The implementation strategy has been subject to revisions over time. Most significantly, it became apparent early in 2011 that the original completion date would not be achieved for reasons set out in the Board's first progress report (A/67/164). Those revisions have led to a change in the forecast completion date from 2013 to 2018 and an increase in the projected cost from $248 million to $348 million.

7. In 2011, the steering committee decided to adopt a phased implementation strategy to put the project on a more realistic footing and support as far as possible the implementation of the International Public Sector Accounting Standards (IPSAS) in peacekeeping operations from July 2013 and in the wider United Nations from January 2014. The enterprise resource planning system will now be deployed

in five clusters, or groups of United Nations departments, offices and entities, in three functional phases:

(a) **Foundation**: finance process (funds management and financial accounting), supply chain, project management and sales and distribution. Umoja Foundation is essential to supporting IPSAS requirements;

(b) **Extension 1**: human resources management processes such as organizational and position management, personnel administration, entitlements, benefits and time management. Payroll, travel initiation, travel expenses and online booking are also included;

(c) **Extension 2**: other important administrative processes such as budget formulation, force planning, programme management, supply chain planning, warehouse management and conference and event management, full grants management and commercial activities.

8. Since the Board's previous report, the project, following an initial pilot, entered a full implementation phase with the full roll-out of Foundation in peacekeeping operations in November 2013 and in 17 of 38 special political missions in March 2014. The roll-out brought a number of significant issues to the fore, resulting in the formation of a cross-functional task force to lead intensive corrective action, and gave rise to a revised deployment plan. The implications of those developments for the budget, completion date and successful delivery of the project and its intended benefits inform the focus of the present report.

B. Scope of the report

9. In its resolution 66/246, the General Assembly requested that the Board should provide annual progress reports on the implementation of the enterprise resource planning project. In its first report (A/67/164), the Board highlighted that the project was in substantial difficulty and that the plans covering the scope, budget and timetable for the project were highly optimistic and lacking in rigour. The Board could provide no assurance that the project would be delivered on time, within cost and to specification. Many of the problems pointed to weak project governance and management, as well as to wider and deeper weaknesses in United Nations governance and management of business transformation.

10. In its second report (A/68/151), the Board acknowledged that the Administration had made progress in addressing some of the weaknesses and had put the project on a sounder footing. It highlighted, however, that the implementation challenges were about to escalate, as the project moved into a phased, multi-site implementation process, using multiple vendors, across both peacekeeping operations and the wider Secretariat, and that significant effort would be required to ensure that the United Nations was ready for deployment. In particular, the Board noted systemic issues that needed to be addressed, including the Organization's ability to manage change and the ambitious planning assumptions for the project.

11. In the present third progress report, the Board focuses on:

(a) **The beginning of the implementation of the project**: the roll-out of Foundation in peacekeeping operations and special political missions, the issues that have arisen and the effectiveness of the Administration's response;

(b) **Managing the project to successful delivery**: the current status of the project and the action required to apply the lessons from Foundation roll-out and realize the opportunity to modernize the business administration of the United Nations;

(c) **Governance and management**: the action taken by the Administration in response to the Board's previous recommendations on benefits realization, project governance and risk management, integrated project planning and its commercial strategy.

12. The Board continues to coordinate closely with the Office of Internal Oversight Services (OIOS) to use the results of its programme of work on the implementation of the enterprise resource planning system, including its audit of the Foundation pilot. The Board notes the consistency in findings, and commonality of perspective, on the issues facing the project.

II. Beginning of implementation

13. In the present section, the Board examines the issues that arose following the initial roll-out of Foundation, as a pilot, in the United Nations Interim Force in Lebanon (UNIFIL) and subsequently in peacekeeping missions and special political missions. The implementation of Foundation involved the roll-out of key finance and other processes (see table 1) in:

(a) The pilot site: 370 staff at UNIFIL and the Office of the United Nations Special Coordinator for Lebanon and their supporting offices in New York in July 2013;

(b) Cluster 1 (peacekeeping missions) in November 2013;

(c) Cluster 2 (17 of 38 special political missions) in March 2014.

Table 1
Business process areas included in Foundation

Central support services	**Services to the public and staff**
	Sales (third-party procurement services and billing customers)
	Facilities management
	Real estate administration
	Real estate planning
Programme and project management	Project initiation
	Project planning
	Project execution
Finance and budget	**Financial management**
	Budget implementation
	Grants management

	Cost and management accounting
	Accounting for specific events and activities: internal orders
	Overhead accounting: cost
	Centre accounting
	Financial accounting
	Asset accounting
	General ledger
	Accounts payable
	Accounts receivable
	Taxes and insurance
	Cash management and treasury
	Bank management
	Cash and liquidity management
	Investment accounting
	Treasury and risk management: investments
Supply chain/procurement/ logistics	**Source to acquire**
	Requisition to purchase order
	Low-value acquisition
	Contract management
	Supplier collaborations
	Receipt and inspection
	Inbound processing
	Outbound processing
	Warehouse and storage
	Equipment maintenance
	Equipment assignment and management
	Equipment maintenance and operations
	Decommission and disposal
Human resources	–

Source: Project website.

A. Foundation pilot

14. The Board previously emphasized that the Foundation pilot was a test of the technical functionality of the system and the roll-out strategy, but not of how to adopt more efficient working practices. The Board also emphasized that the high level of support being provided to the pilot would be unsustainable during wider roll-out and that, with only three months between the pilot and the wider deployment in peacekeeping missions, the time to resolve any issues that surfaced would be limited.

15. In the lead-up to Foundation going live on 1 July, and immediately thereafter, status reports submitted to the steering committee showed no significant issues in terms of business readiness, the technical solution and the ability of staff to use the new system. For example, in May and July 2013 the Controller, as process owner for finance, reported that 10 of 11 categories were on track (green),[1] but in June 2013 highlighted possible delays owing to issues preparing master data relating to business partners[2] and the cutover between the existing and new systems for accounts receivable, accounts payable and general ledger balances. Those issues were rated as being on track a month later. Similarly, three other process owners (corporate services, human resources management and logistics) flagged concerns about data readiness.

16. In August 2013, the project team reported that a number of critical issues had emerged, including questions on how to use the system, items "stuck" in the business process, issues with incomplete vendor data and missing bank information. The fundamental nature of those issues, and the 512 reported incidents that resulted, indicated the scale of the challenge facing those implementing the system.

17. All implementation processes for enterprise resource planning systems have problems, in particular at the pilot stage. The Organization used the pilot and the activities preparing all other peacekeeping missions as an opportunity to compare its assumptions with the reality of the system in operation. In August 2013, the Administration identified the following lessons:

(a) The early involvement of the management and the staff and continual assessment of activities on site is essential to providing the necessary focus on critical activities such as data collection and conversion;

(b) Thorough preparation of master data and access controls is essential;

(c) Business process re-engineering is a necessary part of the design and execution of the programme;

(d) An individual migration path should be designed for each entity to support implementation, because each entity has a different starting point in terms of existing process flows, legacy systems and governance structures.

18. The lessons, while valid, are common to many implementation processes for enterprise resource planning systems. The Board is concerned that the Organization, while being aware of what it needed to do, was unable, in the time available, to translate this into improvements in the implementation approach. In addition, while

[1] Communications and engagement, training, change to process, policy, role management, organizational alignment, data management, testing, benefits case, business intelligence and service delivery model.

[2] The term "business partner" refers to any internal or external entity or individual in a commercial relationship with the Organization.

the Foundation pilot identified issues and indicators of likely problems, it was limited in scope and not sufficiently representative of the environment in which full roll-out would occur to give an adequate picture of the potential issues. The Organization therefore lacked a full understanding of the extent of differences in working practices in multiple locations and the scale of the problems that would later emerge.

19. OIOS audited the pilot implementation in UNIFIL, focusing on system and data issues and compliance. It concluded that the "governance, risk management and control processes examined were partially satisfactory in providing reasonable assurance regarding the effective configuration and implementation of the Umoja system in UNIFIL". The audit identified serious concerns, including the fact that the month-end bank reconciliation functionality was not operating; a high number of unprocessed, "parked" documents; a mismatch between roles and authorizations; and problems with the interfaces between the new and legacy systems. OIOS also highlighted that the Administration could have reported progress on business readiness more effectively. The OIOS conclusions confirmed the emerging concerns of the management about the issues.

20. In August 2013, the steering committee decided to delay the further roll-out to peacekeeping missions and special political missions by a month (to November 2013 and February 2014, respectively) because two critical milestones had not been met: the month-end simulation with complete data had not been performed and the master data were not ready. The delay provided more time to address mission readiness, in particular readying the data for migration to the enterprise resource planning system. The intense effort required on the part of staff in peacekeeping missions, the Department for Field Support, the Office of the Controller and the project team to get the missions ready indicate the scale of the issues facing the Administration. In November 2013, the steering committee decided to delay the roll-out to special political missions by a further month (to March 2014).

21. The Administration was conscious that any further delay beyond November 2013 would in effect delay the roll-out in peacekeeping operations by a year, given that the opportunity to support the implementation of IPSAS would have been missed. There was therefore a strengthening of project management disciplines, including weekly meetings between the business areas, the project team and the process owners, and increased monitoring arrangements to enable a swift reaction to any deviation from the revised timeline that exceeded 48 hours.

B. Roll-out of Foundation

22. At the end of October 2013, the Administration rated all nine readiness areas[3] as green, with all 76 criteria passed. On that basis, the process owners and the project director signed off for the project to go live as planned and Foundation was deployed in peacekeeping operations on 1 November 2013. The system went live in four continents, providing services to 4,000 staff in 300 locations supported by a tiered help desk arrangement providing local, regional and central support. The deployment of a viable technical solution in a large and complex part of the United Nations was a significant milestone.

[3] The operational readiness report assesses readiness in the following nine areas: management, business, organization, external business partners, user, application, infrastructure, support and data.

Issues experienced following roll-out and the Administration's response

23. The Organization considered that the roll-out in peacekeeping missions would be less complex than in the wider Secretariat on the basis of its view that the missions were relatively homogenous and amenable to a command-and-control approach. During the pilot and preparations for the go-live stage in the peacekeeping missions, however, that assumption was found to be incorrect. As early as August 2013, the project team was reporting significant issues to the steering committee caused by inconsistent working practices in peacekeeping missions. Those inconsistencies underline the importance of embedding the standardized business processes and new ways of working that the enterprise resource planning system will enable.

24. In February 2014, the project team reported to the steering committee "multiple examples where the operation has circumvented the Umoja solution", noting that "the integrity of the financial statements may be compromised". The scale, range and complexity of the problems were far greater than anticipated. The project team's assessment identified the main causes of the problems as failures to fully train staff to a level where they could perform the tasks required and to ensure that processes in all locations were consistent with the system design.

25. In February 2014, the Administration formed a post-implementation review task force, chaired by the Controller as process owner, to understand and solve the root cause of the problems. The steering committee approved the task force's high-level assessment of 24 critical issues (see table 2) and rectification plans.

Table 2
High-level issues by category, with examples and potential implications

Number of critical issues	*Category*	*Example*	*Potential implications as identified by the Board*
6	Accountability and ownership	Roles, responsibilities and process regarding month-end closure not defined	End-of-month procedures such as bank reconciliations will not be performed or will be performed inconsistently
5	Policy	Policies and standard operating procedures misaligned with the Umoja solution	New process not checked for compliance/existing policies require unnecessary work
4	Training and knowledge-sharing	End users not fully conversant with the functionality of Umoja	Staff will make mistakes/raise queries/ create workarounds
4	Technical	Bank statement upload and bank reconciliation not functioning	End-of-month procedures such as bank reconciliations will not be performed; staff will create workarounds outside of the system to carry on delivering day-to-day operations
2	Change management and communications	Business processes and governance not aligned with the new solution	No alignment between the new processes and business needs — requires process improvement work in each mission
1	Process	End-to-end process designed for consultants and individual contractors not supporting operational requirements	Staff will create workarounds outside of the system to carry on delivering day-to-day operations

Number of critical issues	*Category*	*Example*	*Potential implications as identified by the Board*
1	Business intelligence and reporting	Business intelligence and reporting capabilities not meeting business requirements	Functionality not in place
1	Support	Current support arrangements not working	Functionality not in place

Source: Board analysis of information provided to the steering committee.

26. The issues identified and the implications were serious. The solutions were therefore wide ranging and required a high level of effort in a short space of time, including clarifying policies, roles, operating procedures and reporting responsibilities; taking action to correct open support items, notably bank reconciliation, accounts payable and payroll clearing; resolving interfaces with locally developed critical applications; and increasing the understanding of the staff and the management of the new operating model and business processes. Nevertheless, the task force, while a pragmatic response, is not a scalable or sustainable response for issues associated with future roll-outs, given that it has required significant expert resources. For example, 20 experts are involved in resolving the bank reconciliation issues, when they should be preparing for future roll-outs of the system.

27. Progress in resolving the issues noted by the task force has been slower than planned. Major financial issues remain unresolved several months after they were identified, an initial timeline of the end of March 2014 notwithstanding. At the time of preparation of the present report, it appeared unlikely that they would be resolved before the end of the peacekeeping financial year, raising the prospect that the closure of the accounting ledgers could be delayed. As at April 2014, major problems included:

(a) The backlog of open documents relating to bank reconciliation had risen to 58,000, from a base of some 30,000 when the issue was first highlighted in January 2014;

(b) More than 27,000 accounts payable documents remained open;

(c) There were some 359,000 uncleared payroll documents and an imbalance of $66 million in the payroll clearing account. This was reduced to $42 million once the payroll had been run in May and remedial action implemented.

28. The Administration informed the Board that, as at 11 July 2014, the position had improved. Its figures have not been subject to audit, but the Board will revisit the matter during its audit of peacekeeping operations. According to the Administration, there were:

(a) A total of 8,579 open items in United Nations bank accounts;

(b) A total of 17,322 accounts payable documents still open;

(c) A total of 49,662 uncleared payroll documents and an imbalance of $21 million in the payroll clearing account.

29. The issues arising demonstrate poor compliance, a lack of internal controls and weak management of financial processes. They also suggest that some of the potential implications noted by the Board in table 2 occurred, especially staff working outside of the system to carry on delivering day-to-day operations. The solutions described by the task force appear, in the Board's view, unlikely to deliver the strong financial control required and that an integrated enterprise resource planning system should routinely provide. The Board would expect to see stronger action involving changes to the business processes, the system or the authorities attached to roles.

Implications for the Board's audit of peacekeeping financial statements

30. The problems identified, if left unresolved, have implications for the Board's audit and opinion on the first set of IPSAS-based financial statements for the peacekeeping operations for the period ended 30 June 2014. The high volumes of open and unreconciled transactions in respect of bank reconciliations, accounts payable and payroll affect the integrity of peacekeeping accounting and financial records. It is also clear that key internal controls, primarily bank reconciliations, may have been inoperable throughout, or for part of, the financial year. As noted above, the time that it is taking to resolve the problems also raises the prospect of delays in closing the general ledger and consequent delays to the preparation of financial statements for the peacekeeping operations.

31. Any delay in cleansing the accounting records and producing draft financial statements will have an adverse impact on the tight audit and reporting timetable for peacekeeping operations. The Board will continue to work closely with the Administration to monitor progress resolving the large-scale accounting problems arising from the implementation of the enterprise resource planning project and will assess the impact on its audit opinion as it completes the audit of the financial statements for peacekeeping operations for the period ended 30 June 2014.

Backlog of unresolved incidents

32. During the implementation of any enterprise resource planning system, it is essential that staff can continue to perform their day-to-day duties. Queries are inevitable, which is why a key form of support in any system roll-out is a well-established process for raising, escalating and addressing issues ("incidents") from the local level to the regional and global levels. Following the roll-out of Foundation, there is a growing backlog of unresolved incident reports and the time being taken to fix them is increasing. As at 31 March 2014, 1,300 incidents remained unresolved by local or regional staff. Consequently, the project team was fixing issues (such as customer assistance matters) that should have been dealt with either locally or at the regional service desk in Brindisi, Italy.

33. In addition to affecting business delivery, not resolving even low-priority issues can lead to local user frustration, resulting in users raising all issues as critical or avoiding the help desk altogether and developing local workarounds. The issue of local staff escalating problems to the project team is affecting the time available to its members to undertake work in preparation for future roll-outs. As at 30 June 2014, the Administration reports that 933 incidents remain unresolved and the rate of resolution is improving.

III. Managing the project to successful delivery

34. In the present section, the Board summarizes the current status of the project and, drawing on the Administration's experience of the Foundation pilot and roll-out, the implications for the management of the project. It draws on steering committee minutes and papers, the project risk register and interviews with key stakeholders.

A. Current status

Project expenditure

35. As at 31 March 2014, the Administration had spent $271 million on the project (see table 3), some 78 per cent of the approved budget available until December 2015. In the continued absence of a robust method for linking budgets and expenditure to deliverables (on which the Board comments in section IV), the Board can provide no assurance that the project is on track in terms of what has been delivered compared with the level of resources consumed. It is likely, however, that the state of project progress and readiness is less than it should be for the level of expenditure to date (see table 4).

36. The breakdown of costs by category (see table 3) indicates an average monthly expenditure ("burn rate") of $4.2 million in 2015 (forecast expenditure in 2015 divided by 12 months). On that basis, and assuming a steady burn rate, the project will have used the approved budget by mid-June 2015, some six months before the end of the biennium. The project could run out of budget sooner if more money is required because of any further revisions to the timeline or because more resources are required to perform rectification work.

Table 3
Breakdown of expenditure and anticipated costs until December 2015, by category

Object of expenditure	*Actual expenditure 30 April 2012*	*Actual expenditure 31 March 2013*	*Actual expenditure 31 March 2014*	*Forecast December 2014*	*Forecast December 2015*	*Description*
Staff costs	20.5	33.3	49.2	61.9	76.8	Cost of the project team
Other staff costs	10.9	15.5	24.1	31.7	38.9	Temporary staff costs, such as general temporary assistance and subject-matter experts
Consultants and experts	0.9	1.6	1.9	2.4	2.9	Consulting services covering advice on project management, procurement matters and legal matters
Travel	2.0	2.7	3.3	4.6	5.9	Site visits relating to change management and site readiness
Contractual services	54.5	101.8	132.1	154.9	170.6	Includes payments to the design and build vendors for Foundation and Extension 1
General operating expenses	9.0	13.2	15.6	16.5	19.4	Includes expenditure on office premises and communication
Office supplies and materials	0.8	0.8	0.9	0.9	1.0	Office supplies and equipment
Furniture and equipment	24.6	39.9	44.0	49.0	56.3	Includes expenditure on software licences and maintenance fees
Total	**123.2**	**208.8**	**271.1**	**321.9**	**371.8**	

Source: Board analysis of project data.

Table 4
Completion of the design, build and roll-out of the project as at May 2014
(Percentage)

Phase	*Foundation*	*Extension 1*	*Extension 2*
Design	91	84	40
Build	86	74	–
Roll-out	50	–	–

Source: Project team estimates.

Anticipated final cost and project budget

37. The Board has previously reported on problems and delays at the beginning of the project that over time led to a significant increase in the estimated final cost. The Administration forecasts that it will spend $371.8 million by the end of the biennium 2014-2015 to complete the design, build and implementation of Foundation and Extension 1 and the design of Extension 2. That will result in a funding gap of $23.8 million against the current approved budget of $348 million (see table 5).

38. The Administration previously reported to the General Assembly that at least an additional $30 million would be required for contractual services to build, test and deploy Extension 2 between 2016 and 2018. While that amount has not yet been approved by the Assembly, it would, if included, result in a current anticipated final cost of $401.8 million. The Administration has not yet provided an estimate for any other costs of deploying Extension 2, meaning that the figure is likely to be higher.

Table 5
Project budget and estimated final cost
(Millions of United States dollars)

Estimated cost for the biennium 2014-2015 (Foundation and Extension 1)	371.8
Estimated cost required for the biennium 2016-2017 (Extension 2)	30
Total estimated cost	**401.8**
Approved budget for the biennium 2014-2015 (Foundation and Extension 1)	348
Budget required for Extension 2 (contractual services only)	30
Total required budget	**378**
Variance between the total estimated costs and the approved budget (2014-2015)	**(23.8)**

Source: Board analysis of project data.

Notes: The Administration originally estimated a budget of $248.3 million to the end of the biennium 2014-2015. The approved budget has increased over time to $348 million, an increase of 29 per cent.

Work on Extension 2 has been deferred to 2016-2017 onwards. The Administration has reported an estimated cost of $30 million for contracted services required to build, test and deploy Extension 2, but a budget has not yet been approved. The figure covers only contractual services, meaning that the full cost of Extension 2 is likely to be higher.

39. Considering the project's history of escalating costs, the current burn rate and the significant challenges that remain, it is unlikely that the full scope of the project will be delivered within the current cost forecast. The Administration may need to request an increase in the project budget or place increased demands on departmental budgets to support implementation.

Associated costs

40. As previously reported, neither the project nor relevant departmental budgets included the associated costs of implementing the enterprise resource planning system, such as data cleansing, training, user testing and process change. While noting the previous work to define the principles of how to identify associated costs, the Board recommended that the Administration should develop a robust estimate of the costs and clarify how they would be met and establish guidelines for how the associated costs should be managed and tracked by business areas. That recommendation has not been implemented, limiting the Administration's ability to forecast the resources likely to be needed to achieve business readiness and fund post-implementation activity in future deployments.

41. Early in 2013, the Controller issued instructions to offices and departments clarifying that, for the biennium 2014-2015, the associated costs would be borne by departmental budgets. While those costs are likely to be extensive, because they are absorbed by existing departmental budgets, the effect is one of displacing other expenditure rather than a budgetary increase in real terms. In addition, there is no budget allocation for staff time used to undertake business change activities. While effort expended may not result in a financial cost, the time spent is either placing a burden on staff or displacing other work.

42. Owing to current limitations in management information, overall United Nations expenditure on information and communications technology is difficult to track (see A/67/651), but the Administration estimates that it was in excess of $250 million for the biennium 2012-2013 (see A/68/6 (Introduction)). The Administration has also estimated the level of associated spending on the information and communications technology needed to support the project in peacekeeping missions to be $38.2 million in 2014-2015. That amount comprises budgets of more than $20 million for the acquisition of equipment, services and licences in the 15 peacekeeping missions to support the roll-out of the system. A further $17.1 million relating to implementation is budgeted for travel ($1.2 million) and communications equipment ($15.9 million). There are currently no estimates for other United Nations locations.

43. The cost of training is to be borne by existing departmental training budgets as an associated cost. There is, however, still no evidence that a training needs analysis has been performed, that budgets have been allocated or funds ring-fenced or that there has been any assessment of whether current training budgets will be adequate. The Board recommended that the Office of Human Resources Management should confirm that the current training budget will fund the appropriate level of training for the required number of staff, but there is no evidence that such analysis has been performed.

Project schedule

44. The project is currently forecast to be completed in 2018, some five years later than expected. The project schedule has been subject to substantial revisions since the project began. This trend has continued over the past year (see table 6).

Table 6
Changes to Umoja deployment schedule from July 2013 to February 2014

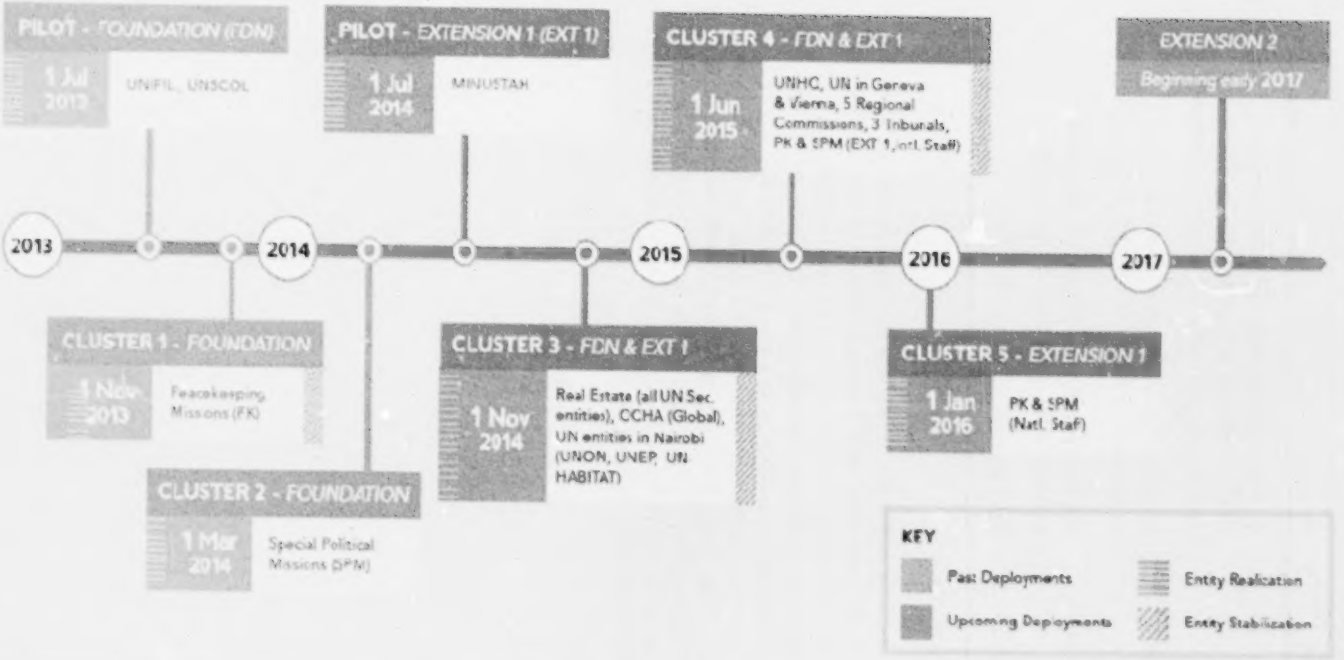
Target date	*Actual date*	*Phase*
July 2013	July 2013	Pilot implementation of Foundation in UNIFIL and the Office of the United Nations Special Coordinator for Lebanon completed
October 2013	November 2013	Implementation of Foundation in peacekeeping missions (cluster 1) complete
January 2014	March 2014	Implementation of Foundation in special political missions (cluster 2) complete
February 2014	July 2014	Pilot Extension 1

Source: Board analysis of project data.

45. In March 2014, the steering committee reprofiled the deployment schedule on the basis of the scale of the problems that emerged following the roll-out in peacekeeping operations and the level of effort required to resolve them, technical fixes required in the system and concerns regarding the readiness of the wider Secretariat, especially business units based in New York. Preparations in the wider Secretariat were already behind schedule, but were affected further because resources that should have been supporting business units were diverted to the problems in peacekeeping operations. Figure II shows the Administration's revised deployment schedule. It does not show the delay in roll-out to each business unit, which the Board considers important to report.

Figure II

Revised deployment approach for the enterprise resource planning project



UMOJA FOUNDATION (FDN)

Finance (funds management and financial accounting), supply chain (real estate, plant maintenance, logistics execution, and procurement), project management, and sales & distribution (third-party procurement services and billing)

UMOJA EXTENSION 1 (EXT 1)

Organizational and position management, personnel administration, entitlements, benefits, time management, payroll, travel initiation, travel expenses, and online booking

UMOJA EXTENSION 2

Budget formulation, force planning, programme management, supply chain planning, warehouse management, conference and event management, full grants management and commercial activities

ENTITY REALIZATION

A 6-month phase preceding Go-Live that includes configuration, testing, quality assurance and training

ENTITY STABILIZATION

A 12-month period following cluster 1, 3 & 4 Go-Live, during which the entity measures the change between as-is and to-be

46. The revised deployment approach involves a change in the timing and sequencing of the roll-out and a move to an integrated deployment of Foundation and Extension 1 from July 2014. It includes earlier deployment of the system to the Office for the Coordination of Humanitarian Affairs than previously planned, in addition to an earlier roll-out of the real estate management module throughout the Secretariat by the end of 2014. The roll-out of Extension 1 to other entities is deferred from July 2014 to June 2015 (see table 7).

Table 7
Key elements of the revised deployment approach

Pilot Extension 1 (July 2014)	Pilot deployment of Extension 1 (integrating human resources, travel and entitlements), which will take place at the United Nations Stabilization Mission in Haiti. This will allow testing of the integration of the system with Inspira and the new human resources portal, in addition to an initial deployment of employee and manager self-service portals in the system for staff.
Cluster 3 (November 2014)	Integrated deployment of Foundation (for procurement, finance, supply chain and logistics) and Extension 1 (for human resources, travel and entitlements) in United Nations offices in Nairobi (United Nations Office at Nairobi, United Nations Environment Programme and United Nations Human Settlements Programme) and operations of the Office for the Coordination of Humanitarian Affairs in New York and Geneva.
Cluster 4 (June 2015)	Integrated deployment of Foundation and Extension 1 to all United Nations offices in New York and Addis Ababa (previously part of cluster 3), all offices away from Headquarters and remaining entities of the Secretariat, in addition to expansion of Extension 1 to cover international staff at peacekeeping operations and special political missions already using Foundation.

Source: Board analysis of project data.

47. In the light of the delays incurred, and the likelihood of further delays, the Board considers that the revised deployment schedule approved in February 2014 is unlikely to be met. Experience from the initial roll-out of Foundation in peacekeeping operations, which was expected to be less complex than the wider Secretariat, and the additional time and resources since required to stabilize the system, are strong indicators of the post-implementation challenges that the Administration will face, in particular during the roll-out of Foundation and Extension 1 in New York and the wider Secretariat.

48. **The Board makes a recommendation on the project timetable and budget in paragraph 29 (a) of the summary.**

49. The Administration remains confident that the current timeline to realize benefits will remain the same. Without robust benefits plans to audit (as commented on in section IV), the Board cannot reach a conclusion on either the robustness of benefits projections or the timeline for realizing them. While the high level of resources used in operating the current inefficient business processes offers the potential for significant savings, the position reported in the fifth progress report of the Secretary-General, with significant benefits beginning to accrue from 2017, starting in peacekeeping operations, appears challenging.

50. The Board remains concerned that the project is not subject to systematic independent assurance, its previous recommendations notwithstanding.[4] The Board previously emphasized that it was imperative for the Administration to design and implement suitable arrangements to ensure that the steering committee and the General Assembly were fully informed and able to challenge the project on scenarios that might have an impact on current performance and future delivery (e.g. reviews by other United Nations entities of the project's status, or cost and timeline assumptions, at key points in the project). This remains the case, in particular in the light of the need for a realistic assessment of the impact on and lessons of the Foundation roll-out for the project costs and timelines.

B. Applying the lessons from Foundation roll-out

51. It is important that the lessons from the Foundation pilot and initial roll-out be translated into an improved approach for future roll-outs. The Board sets out below what it considers to be the key areas of action required.

Training

52. The Board has previously highlighted concerns about reductions in training budgets, undertaken at a time when the project was under financial pressure, and the potential implications for successful future roll-outs. In the event, a key lesson from the initial roll-out is that the Organization dedicated insufficient resources and emphasis to high-quality training for staff involved in the implementation and adoption of new ways of working. In response, the Administration has increased its training effort and established a training academy to train 50 experts to help to embed the new ways of working and equip staff with the capability to manage the new business processes.

53 The establishment of the training academy is a positive move, but the training of experts through it is now on the critical path for future releases and depends on the right level and capability of resources being made available. The postings and overall retention of Umoja experts should be actively managed, given that any shortage or delay will affect stabilization efforts in future implementations.

54. The cost of training is borne by departmental training budgets. The United Nations has a per capita training budget of $1,778 per year (not including language and security training), meaning that any investment in training relating to the enterprise resource planning system must be carefully prioritized. Regardless of the budget from which it comes, given the scale of skills-related issues and the high level of resources required to fix them, the Board considers training to be a key spend-to-save investment in relation to the roll-out of the system and the needs to be prioritized.

[4] Independent project assurance is a well-established component of effective project delivery. It provides an independent assessment by experts who are not involved in delivering the project of whether the elements fundamental to successful project delivery are in place and operating effectively to those that govern and fund a project.

Readiness assessments

55. The criteria used to assess business readiness are comprehensive and in principle sound, but in practice the approach failed to reveal the scale of the issues that needed to be addressed before the roll-out. The assessments should be reviewed to establish whether improvements can be made, such as towards confirming that staff are ready to adopt new ways of working rather than whether activity such as training has occurred. Immediately before Foundation roll-out, user readiness, defined by the Administration as "all key users and users are appropriately trained and certified for go-live", was rated as a pass. The resulting problems identified by the task force prove that this cannot have been the case. Shifting the focus to whether training provides staff with the skills that they need to do their jobs, taking into account existing skills and experience, may avoid problems in the future.

56. **The Board makes a recommendation on readiness assessments in paragraph 29 (b) of the summary.**

Collective responsibility for change management

57. The deployment of Foundation in peacekeeping operations has proved that a collective effort throughout the Organization is a fundamental requirement for the successful implementation of the enterprise resource planning system. The Board previously emphasized the challenges involved in embedding a process-owner approach, in particular the need for an effective partnership between process owners and the heads of each business unit. It encouraged the Administration to establish an agreed process for resolving disagreements before and during roll-out. No such formal process was established, however, although the Board notes an improvement in collective decision-making by the project owner, process owners, heads of business units and the project team through the steering committee.

58. The role of process owner includes ensuring that transformation activities are undertaken in a timely and effective manner and that business readiness can be achieved in the areas affected by changes to the processes for which he or she is responsible. The delivery of those responsibilities is impossible without effective partnership and coordination with the heads of business units, who themselves must also be accountable for, and have the means to deliver, new ways of working in their parts of the Organization. Although the Organization prepared peacekeeping missions for the roll-out, it underestimated the degree of business change required in activities such as training, data cleansing, data management and change management and communications. For future roll-outs, senior leaders must be clear on the resources and skills required, drawing on guidance and support from the process owners and the project team.

59. **The Board makes a recommendation on process owners in paragraph 29 (c) of the summary.**

60. The Board previously reported the lack of a standard approach to, and the relevant skills and expertise in, managing and improving business processes in the United Nations. The project is by definition a step-change initiative with a finite life cycle, meaning that heads of business units need to develop capacity and capability in terms of how to implement and continuously improve working practices. The Board notes the current response to the post-implementation problems in peacekeeping missions and considers its previous recommendation that the

Administration establish a formal approach to managing and continuously improving business processes to be of even more relevance in the short term.

61. **The Board makes a recommendation on change management in paragraph 29 (d) of the summary.**

Change fatigue

62. There is a risk that the Organization lacks the capacity to undertake the multiple roll-outs that the current phased approach to delivery requires and that the demands on an already hard-pressed project team are unsustainable. The diversion of project staff to help to stabilize the roll-out in peacekeeping missions has only increased the level of pressure. Project team fatigue had been consistently one of the highest-rated risks reported to the steering committee in the preceding six months.

63. The roll-out of Foundation in peacekeeping missions also illustrates the challenge to business areas endeavouring to manage the impact of concurrent transformation projects. For example, finance staff in peacekeeping operations are concurrently dealing with the implementation of IPSAS, the global field support strategy and the enterprise resource planning system, all alongside the delivery of business as usual.

Target operating model

64. A target operating model is an articulation of how an organization will organize its resources to achieve its strategic objectives, detailing what work will be performed by which staff in what locations. There is not yet a clear and agreed target operating model for the United Nations. The need for one is now classified by the management committee as a key risk mitigation element in relation to business transformation. There is a risk that individual transformation initiatives such as the enterprise resource planning project will not be delivered in a manner that supports any future organizational design of the United Nations. At a more practical level, the project team is addressing issues such as defining what work individuals at different locations should undertake. Addressing those wider strategic change issues at the same time as delivering the working technical solution is a significant increase in scope that will inevitably cause risks and issues for the project team.

Managing organizational change

65. The Board has previously emphasized that the implementation of the enterprise resource planning system needs to be managed as part of a wider business transformation, the objective being, following successful delivery of the technical solution, to modernize the administration of the United Nations. The Administration expects the implementation of the system to be accompanied by changes to its management framework, including reform of the Organization's target operating model and adjustments to the accountability and responsibility framework (see A/67/651, paras. 57-59 and figure III). The project has reached a critical juncture. The effective delivery of the objectives of implementing the system will require the senior management to increase efforts in three main ways: articulate the relationship of the project to wider administrative reform of the United Nations, including a defined target operating model; manage all improvement projects as a portfolio, including clear sequencing; and work collectively to deliver future roll-outs by

ensuring that the required resources and activities are in place, reinforcing this with clear and consistent messages and supporting action.

IV. Governance and management

66. The Board previously acknowledged that the Administration had made progress in strengthening the management of benefits and project governance and management. It highlighted, however, that more work was needed, in particular given the increasing level of challenge. In the present section, the Board provides an update on the further progress made in the past year.

A. Managing benefits

67. The Board previously commented on the progress towards the realization of benefits. Those benefits include the exploitation of improved and timely consolidated financial and performance information and the introduction of more efficient and cost-effective working practices through improved speed of processing and streamlined processes.

Exploitation of improved information

68. The management acknowledges that more work is needed to raise awareness of the qualitative benefits to be gained, in particular through the exploitation of data and information. This depends on understanding data opportunities, having the capability to use data and organizational buy-in for acting on data insights. The Board notes that the Administration's plans for 60 super users to lead this work and develop improved business intelligence for the management have not yet been delivered owing to a lack of available resources. The Administration has more recently revised the number of super users needed to 50. Training for the role began in May 2014.

Quantifying the benefits from more efficient and cost-effective ways of working

69. The Board previously recommended that the Administration should adopt a consistent approach to benefits realization and design a robust methodology that clearly defined the current status of operational performance in each business unit regarding time, cost and quality; the level of future performance to be achieved after implementation; the approach and investment involved to achieve the future performance target; and how the benefit achieved would be measured and reported. A more consistent approach to estimating benefits has been adopted by the Administration, for example by setting out how categories of benefit are to be calculated. As at the time of preparation of the present report, however, the Administration had not completed its statements of benefits and benefits realization plans, nor established baselines against which to measure improvements.

70. The Office of Human Resources Management has progressed furthest in developing a practical methodology to estimate the impact of the enterprise resource planning system on an individual entity. The methodology, which has been tested in four locations, provides a model to calculate the benefits realization plans using the number and levels of staff members and the volume of transactions to be processed

at any location or entity. The model will be used to calculate the benefits at all entities based in New York in preparation for deployment in the middle of 2015 and should have wider applicability.

71. The Administration is yet to produce a revised quantification of the expected annual benefits that the project might realistically deliver. Process owners have an opportunity to use learning from the implementation to date to refine any assumptions around potential qualitative and quantitative benefits when developing benefits realization plans for each department or office. The onus remains on the Administration to establish clear baselines and appropriate measurement methodologies to objectively demonstrate how the benefits, set against the costs of implementation, can be translated into budget reductions (cash available to Member States or resources transferred into other value-adding activities). This is an integral part of the implementation of an enterprise resource planning system. In the meantime, the Administration remains committed to realizing annual recurring quantitative benefits from the project of between $140 million and $223 million by 2019, from refined business processes, automation, reduced duplication and streamlined administrative processes.

72. **The Board makes a recommendation on benefits realization plans in paragraph 29 (e) of the summary.**

B. Project governance

Steering committee

73. The Board has seen a steady improvement in the quality of the information being presented to the steering committee, but has previously highlighted a number of areas to enhance the committee's oversight role and considers that more still needs to be done, for example through integrated plans, better tracking of expenditure against project deliverables and improved cost and scenario analysis in relation to risks.

74. The Board acknowledges that the steering committee responded promptly to the emerging issues and problems shortly after the Foundation roll-out went live, for example by making important and pragmatic decisions to reprofile the project deployment schedule and establish the post-implementation review task force. As financial pressures build on the project, greater attention will need to be given to the financial impact of decisions, however. For example, the committee agreed upon a series of actions presented by the task force in March 2014, but they were not costed. In addition, decisions to reprofile the implementation phases were initially taken without consideration of the cost increases and impact on benefits realization. Furthermore, the Board has seen no evidence that the committee has examined longer-term issues such as the planning and testing of assumptions about future roll-outs and release of functionality after 2015 and horizon and risk scanning to address and resolve medium-term impediments to success.

Risk management

75. There have been improvements to the oversight and management of the risk management process. The risk register is regularly reviewed and updated by the project management office. The duplication of entries has been removed, and there

is evidence of an increased pace of response in tackling the escalated risks and issues, resulting in a significant reduction in the number of open entries on the risk register (see table 8). The Administration also now tracks the average age of unresolved project risks not yet mitigated and unresolved project risks actively in mitigation, which are better measures of progress than how long a risk remains unresolved, because inevitably some risks will never be resolved.

Table 8
Reduction in the number of open risks and issues

Type of entry	*Number as at April 2013*	*Number as at March 2014*
Risk	199	38
Issues	491	41
Total	**690**	**79**

Source: Project risk register.

76. The steering committee is presented with monthly heat maps and information about the most pressing risks, but receives no information regarding the potential cost impacts of the risk. Such information would support more effective decision-making on prioritization and mitigation. With the project in deployment, more risks are emerging that relate to business area readiness, which can be mitigated only by sharing responsibility and accountability for risk management with the business areas.

C. Project management

Integrated project planning

77. The Board has emphasized the need for a clear project timetable and implementation plan linked to the budgets allocated to funding various project tasks, including an allowance for any risks likely to arise, as well as for clearly identified critical paths and review points to help to manage the inevitable cost escalations and delays common in major projects. The Board was particularly concerned that the increasing complexity of the project in the second half of 2013 would require an integrated plan, capturing all the activities to be undertaken by the project team, contractors and the wider Administration.

78. The project team has begun to use a more detailed and integrated master project plan that brings together the plans for the Extension pilot in the United Nations Stabilization Mission in Haiti (due in July 2014), real estate (due in July 2014) and cluster 3 (due in November 2014), disaggregated into work tasks, showing the percentage of work completed and the target date. It is not, however, linked with the level of resources required, nor does it show overall project workplans, meaning that it is not integrated in the way that the Board had recommended. For example, it does not show other work that is under way, such as post-implementation support, training for mainstreaming and support work for the next phases of deployment.

Monitoring expenditure against progress and deliverables

79. The project remains unable to determine exactly what should have been achieved in return for spending a given percentage of the budget. The project team did not finalize its work, as previously recommended, to establish a link between budgets, milestones and deliverables. The project team informed the Board that it remained unable to accurately assign costs and budgets to deliverables and milestones because it was unable to determine accurately the amount of staff time spent on specific deliverables, and therefore it considered it impossible to establish links between efforts, value and delivery. There is also no evidence of any dedicated business analysis to show how the remaining resources will be used to complete the technical aspects of the project, or of the wider United Nations resources required to achieve business readiness. Budget forecasts for the project are based on staff numbers, but other forecasts are not based on any specific criteria because there are no historical data on which to build estimates, nor any bottom-up or work breakdown structure to provide an indication of the resources likely to be required.

Commercial strategy

80. The Board previously recommended that the Administration should prepare an overarching commercial strategy for the project to optimize the value from major suppliers, balancing costs and risks to delivery. The Administration has yet to develop an overall commercial strategy, but has demonstrated evidence of a considered commercial approach to the remaining procurement required. On 10 February 2014, the Organization decided to consolidate the long-term requirements for maintenance and integration/implementation services in support of the project under a single contract, which is anticipated to be executed within the third quarter of 2014. In the interim, existing contracts with the current system integrators continue to provide the core services. The Administration's plan is that all future requirements for Extension 2 and any other requirements and enhancements resulting from the current deployments will be designed, built, tested and supported by the new vendor.

V. Acknowledgements

81. The Board wishes to express its appreciation for the cooperation and assistance extended to its staff by the Under-Secretary-General for Management and the project director, together with the members of their staff.

(*Signed*) Sir Amyas C. E. **Morse**
Comptroller and Auditor General of the
United Kingdom of Great Britain and Northern Ireland
Chair of the Board of Auditors
(Lead Auditor)

(*Signed*) **Liu** Jiayi
Auditor General of China

(*Signed*) Ludovick S. L. **Utouh**
Controller and Auditor General of the
United Republic of Tanzania

30 June 2014

Annex

Status of implementation of recommendations

	Summary of recommendation (A/68/151)	*Paragraph*	*Financial period first made*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*	*Closed by the Board*	*Board comments on status — June 2014*
1	The Board recommends that the Administration design, communicate and implement a plan within each business area to exploit the defined benefits of up-to-date and consolidated data from the ERP system, including how it intends to realize both qualitative and quantitative benefits of improved information.	16	2012		X				The Administration has plans to train super users in data analytics, but the training has not yet been conducted and the plan is therefore not implemented. The Administration has also established an Umoja training academy.
2	The Board recommends that the Administration adopt a consistent approach to benefits realization which includes: (a) clear categories of qualitative and quantitative benefits; (b) how the different categories of benefits will be measured; (c) a plan to realize the different benefits; and (d) a process to monitor and sign off when the benefits have been realized.	19	2012		X				The Administration has established potential types of qualitative and quantitative benefits and how they may be measured. They have not been agreed upon and adopted by all process owners and the Board has seen no plan for monitoring and signing off on benefits.
3	The Board recommends that the Administration continue to embed the concept of process ownership, including establishing an agreed process for solving disagreements between process owners and heads of departments and offices prior to and following the implementation of the ERP project.	21	2012					X	The Board closed this recommendation because it is a subset of a new recommendation in the present report (summary, para. 29 (d)).
4	The Board recommends that the Administration design a robust methodology which clearly defines: (a) the current status of operational performance in each business unit regarding time, cost, quality; (b) the level of future performance to be achieved post-implementation; (c) the approach and investment involved to achieve the future performance target; and (d) how the benefit achieved will be measured and reported.	26	2012			X			The Board has seen no evidence that this methodology has been developed.

	Summary of recommendation (A/68/151)	*Paragraph*	*Financial period first made*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*	*Closed by the Board*	*Board comments on status — June 2014*
5	The Board recommends that the process owner for finance use the results of the UNIFIL pilot to refine any assumptions around potential qualitative and quantitative benefits when developing benefits realization plans for each department or office.	32	2012					X	This recommendation has been closed and a new recommendation made in the present report (summary, para. 29 (e)).
6	The Board also recommends that other process owners adopt this approach when developing benefits realization plans during the pilot of their respective business processes.	33	2012					X	This recommendation has been closed and a new recommendation made in the present report (summary, para. 29 (e)).
7	The Board recommends that the Office of Human Resources Management confirm that the current training budget will fund the appropriate level of training for the required number of staff.	44	2012		X				The Office of Human Resources Management was unable to confirm that the current training budget would fund the appropriate level of training for the required number of staff. The Office formulated a revised learning and career support strategy, presented to and endorsed by the management committee in March 2014.
8	The Board recommends that the Administration issue guidance to departments and offices on how the associated costs of the ERP project should be quantified, managed and tracked.	64	2012			X			As stated in section III of the present report, there has been no action on this recommendation. The Administration's view is that "collating this information requires additional manual processes and efforts, which could, in the view of the Administration, be better directed to business readiness and training activities".
9	The Board recommends that the project team prepare an overarching commercial strategy which seeks to (a) optimize the value from major suppliers to the ERP project, balancing cost and risks to delivery; and (b) sets out the parameters against which all future procurements should be undertaken.	81	2012		X				The Administration has not developed an overarching commercial strategy for Umoja. It has, however, demonstrated evidence of a considered commercial approach to the remaining procurements.

	Summary of recommendation (A/68/151)	*Paragraph*	*Financial period first made*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*	*Closed by the Board*	*Board comments on status — June 2014*
10	The Board also recommends that the Administration review the need to more generally develop its commercial skills and ability to support major projects.	82	2012		X				As stated in the Board's report on the United Nations (A/69/5 (Vol. 1)), the Administration has taken steps to improve the training of procurement staff in a number of disciplines.
11	The Board recommends that the ERP project team finalize as a matter of urgency the work to develop (a) a detailed and fully integrated project plan, and (b) significantly enhanced project management arrangements to enable more detailed cost and timetable forecasting, and control of risks, including appropriate scenario and contingency planning.	84	2012		X				Some phases on the project plan are combined, but overall this does not present critical paths for all work required. There has been some progress in respect of monitoring progress against expenditure.
12	The Board recommends that the Administration design and implement assurance mechanisms which enable the steering committee to challenge the project on scenarios which may impact on current performance and on future delivery.	105	2012			X			The Administration has not established a system of independent assurance to challenge information from those implementing the project (process owners and the project team). As noted in the previous report, the project team has arranged peer reviews and technical assurance from a professional services firm.
13	The Board recommends that to support better informed decision-making, the project team provide status updates to the steering committee that reflect uncertainty levels relating to forecasts concerning cost, time and quality (for example, by including best case, worst case and likely case scenarios).	112	2012			X			The Board notes an improvement in the information supplied to the steering committee, but there is no evidence that the committee has routinely sought information on uncertainty levels or range forecasts, including best-case, worst-case or likely-case scenarios.
14	The Board recommends that the project director: (a) consider the gaps identified by the Board and, on that basis, reassess the benefits model for the ERP system in consultation with process owners; (b) agree on a baseline with identifiable benefit figures to be realized by each process owner; (c) determine what the actual cashable savings will be; (d) assign accountability to process owners for	19	2011					X	The Board considers this recommendation closed because the Administration has implemented parts (a) and (b) of the recommendation, as previously reported. Part (d) has since been implemented. Parts (c) and (e) are considered to be closed because the Board will follow up on this aspect of benefits realization (summary, paras. 16, 19, 21 and 26).

Summary of recommendation (A/68/151)	Paragraph	Financial period first made	Fully implemented	Under implementation	Not implemented	Overtaken by events	Closed by the Board	Board comments on status — June 2014
realizing the agreed savings and benefits and for developing plans to achieve them; and (e) communicate to the General Assembly what changes to the Organization it proposes to implement to realize the intended annual benefits from the project.								
15 The Board recommends that, in order to enable transparent planning and reporting of the achievement of the projected benefits of implementing the ERP system and to ensure clarity as to whether their achievement will require posts to be released or redeployed, the Administration consult the General Assembly on its benefit-realization plans.	21	2011		X				Implementation of this recommendation will occur only following the finalization of detailed benefits realization plans. The Administration is currently producing those plans and intends to submit an update to the General Assembly in the sixth progress report.
16 The Board also recommends that the Administration: (a) assign clear responsibility for all tasks related to developing proposals for realizing further benefits through changes in the approach to service delivery; and (b) publish a timetable against which those proposals will be developed.	23	2011	X					The Under-Secretary-General for Management has been assigned responsibility for the future service delivery model.
17 The Board recommends that the Administration: (a) clearly set out how it will manage change and embed more efficient and standardized working practices across the Organization; and (b) develop plans for how staff will be supported to develop the skills, capacity and capability to adopt different working practices.	31	2011		X				The Administration had made progress, but needs to reassess the training approach. The closure of this recommendation depends upon the heads of business units, working with the Office of Human Resources Management, the project team and process owners, to use the knowledge of the Foundation roll-out to assess current training needs and plan for how they will equip staff to adopt and embed streamlined and standardized working practices throughout the Organization. This is linked to the recommendation above (A/68/151, para. 44) and the new recommendations made in paragraphs 29 (b), (c) and (d) of the summary in the present report.

	Summary of recommendation (A/68/151)	Paragraph	Financial period first made	Fully implemented	Under implementation	Not implemented	Overtaken by events	Closed by the Board	Board comments on status — June 2014
18	The Board also recommends that the Administration establish a formal approach to managing and improving business processes to enable continuous reform and improvement following implementation of the ERP system.	32	2011			X			There is no formal approach to continuous reform and improvement being applied by business units. The Board notes, however, that a true system of continuous improvement can take several years to embed fully.
19	The Board recommends that the Administration: (a) establish a detailed project plan linking the budget to milestones and deliverables; (b) clearly set out who owns each part of the budget and what they are responsible for delivering; (c) establish arrangements for capturing information on expenditure and progress to enable it to more effectively monitor progress, maintain closer control over costs and improve decision-making about future expenditure.	52	2011		X				The project team did not finalize its work, as previously recommended, to establish a link between budgets, milestones and deliverables. The project team informed the Board that it remained unable to accurately assign costs and budgets to deliverables and milestones because it was unable to determine accurately the amount of staff time spent on specific deliverables and therefore it considered it impossible to establish links between effort, value and delivery.
20	The Board recommends that the steering committee assess whether the Administration has an adequate number of staff with the appropriate commercial and contract management skills necessary to manage contracts with the multiple parties responsible for delivering different interdependent parts of the project.	57	2011	X					The Board has seen evidence that the steering committee has considered this matter.
21	The Board recommends that the project director and the steering committee: (a) reassess the feasibility of the project timetable and budget, taking into account the possibility of optimism bias and the impact of identified risks, and prepare a robust forecast of the cost and the time needed to complete the project under the current scope; and (b) report the findings and proposals to address any increase in cost and time identified to the General Assembly at the earliest opportunity.	72	2011					X	The Board considers this recommendation closed. The Administration reported to the General Assembly on a revised project timeline and budget in the fourth and fifth progress reports, and the Board expects a similar update in the sixth progress report. The Board considers that the current approach to budgeting does not include a robust and explicit pricing of optimism bias or risk as part of the overall forecast. The Board has closed this recommendation and restated the key elements in the present report.

Summary of recommendation (A/68/151)	*Paragraph*	*Financial period first made*	*Fully implemented*	*Under implementation*	*Not implemented*	*Overtaken by events*	*Closed by the Board*	*Board comments on status — June 2014*
22 The Administration agreed with the Board's recommendation that senior management put appropriate controls in place so that they can clearly demonstrate to the General Assembly that assurance can be placed on the reported timetable, and actual and anticipated costs for the ERP project.	75	2011		X				The current approach to cost forecasting means that this recommendation cannot be classed as fully implemented.
23 The Board recommends that the chair of the steering committee and the project director: (a) assign clear ownership of project risks to those with the authority to address such risks; (b) assess and document the likelihood of the occurrence of each risk, including quantified impacts; and (c) establish regular risk monitoring as part of the ongoing budgeting and resourcing arrangements.	80	2011		X				The Board acknowledges the continued positive progress to improve risk management in the project, but also highlights that risks are not quantified considered and part of budget setting.
Total (2012)			–	**6**	**4**	–	**3**	**Three recommendations made in 2013 (A/68/151, paras. 46, 60 and 101) are not included in the table because they are full or partial reiterations of recommendations previously made.**
Total (2011)			**2**	**5**	**1**	–	**2**	**This does not include three recommendations implemented in 2012.**
Total			**2**	**11**	**5**	–	**5**	
Percentage share of total			**9**	**48**	**22**	–	**22**	